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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,434	10/31/2003	Thomas Arend	08516.0007	7744

22852 7590 03/12/2007		EXAMINER
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP		CONTINO, PAUL F
901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413	ART UNIT	PAPER NUMBER
	2114	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/697,434	AREND, THOMAS
	Examiner	Art Unit	
	Paul Contino	2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>26 January 2007</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>*1,3-10 and 12-14*</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>*1,3-10 and 12-14*</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>31 October 2003</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a) ☒ All　b) ☐ Some *　c) ☐ None of:

　　　1. ☒ Certified copies of the priority documents have been received.

　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION: Non-Final Rejection

Response to Arguments

1.   Applicant's arguments with respect to claims 1, 3-10, and 12-14 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1, 3-6, 9-10, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bajpai (WO 97/15009) in view of Carpenter et al. (U.S. Patent No. 6,260,048).

As in claim 1, Bajpai teaches a distributed computer system comprising:

a first main system and a second main system, both to execute applications in cooperation with a human user *(Figs. 1 and 2; page 4 lines 20-21, processor 10 and page 5 lines 7-11, local diagnostic element 28; page 10 lines 28-30, where it is interpreted that there may be multiple main system diagnostic elements 28)*; and

a service system to evaluate problems in the first and second main systems *(Figs. 1 and 5; page 10 lines 17-21 and 28-30, remote digital data processor 12 / diagnostic element 50)*, the service system comprising:

a service module configured to collect problem related data from the main systems, the problem related data representing a problem identified about data in at least one of the first or second main systems *(Fig. 5; page 10 lines 7-9 and 17-19, communications devices 52)*;

an acquisition module configured to acquire knowledge representations, the knowledge representations defining solution identification rules *(Fig. 5; page 10 lines 20-27, expert system engine 56, where the knowledge representations are acquired from databases 58 and 60)*;

a knowledge module configured to store the knowledge representations *(Fig. 5; page 10 lines 20-27, databases 58 and 60)*; and

an inference module configured to process problem related data with knowledge representations to identify solutions and forward the solutions through the service module to the main systems *(Fig.5; page 10 lines 20-27, where the expert system engine 56 is interpreted as an inference module)*, wherein the identified solutions are applied to solve the problems *(page 11 lines 7-12 and 16)*, and wherein the first and second main systems have first and second auxiliary systems, respectively, with auxiliary knowledge representations to evaluate problems in at least one of the first or second main systems and to escalate problem evaluation to the service system *(Figs. 1 and 2; page 5 lines 7-9, where the expert system 30 and databases 34,36,38 are interpreted as an auxiliary system and a knowledge representations, respectively; page 9 lines 19-27 describes problem evaluation escalation)*.

However, Bajpai fails to teach of forwarding preliminary solutions. Carpenter et al. teaches forwarding, from an auxiliary system to a service system, preliminary solutions based on auxiliary knowledge representations when a problem is escalated to the service system *(column 3 line 61 through column 4 line 3, and column 4 lines 41-52, where a trouble ticket reflecting a failure including a description of fault symptoms and other relevant information is a preliminary solution passed from auxiliary remote diagnostics 22-24 to service system 11; a trouble ticket as taught by Carpenter et al. containing failure information in attempt of a solution based on knowledge representation database 23 is interpreted as a preliminary solution, in light of the exemplary problem/solution data as described in the Applicant's Specification in paragraph [065](2)).*

It would have been obvious to a person skilled in the art at the time the invention was made to have included the preliminary solution forwarding as taught by Carpenter et al. in the invention of Bajpai. This would have been obvious because reporting of a preliminary solution as taught by Carpenter et al. in the form of a trouble ticket enhances the fault tolerance and reparability of a client environment while reducing intervention by the client themselves *(column 2 lines 57-63)*, thus increasing the overall efficiency of the resolution system.

As in claim 3, Bajpai teaches the knowledge representations in the service system are enhanced in comparison to the auxiliary knowledge representations in the first and second auxiliary systems *(page 9 lines 22-23)*.

As in claim 4, Bajpai teaches the knowledge representations are enhanced in volume, actuality and complexity *(page 9 lines 22-23)*.

As in claim 5, Bajpai teaches the first and second auxiliary systems forward problem data to the service system after preliminary data analysis by processing with the auxiliary knowledge representations *(page 9 lines 19-29)*.

As in claim 6, Bajpai teaches the services system updates the auxiliary knowledge representations in the first and second auxiliary systems *(page 9 lines 26-27)*.

As in claim 9, Bajpai teaches a method for solving a problem in at least one main computer system by expert systems, comprising:

detecting the problem in the main system *(page 5 lines 14-15)*;

processing problem related data with a first set of knowledge representations of a first expert system to search for a solution to identify a first set of search results, the problem related data representing a problem identified about data in the main system, and the first set of knowledge representations defining solution identification rules *(page 5 lines 18-20 and page 7)*;

depending on processing results, selectively solving the problem by the first expert system *(page 7 lines 14-16)* or forwarding the problem related data together with the first set of search results to a second expert system with a second set of knowledge representations, wherein the first set of knowledge representations define solution identification rules *(page 6 line 11,*

page 9 lines 19-22 and 28-29, and page 10 lines 3-9, where it is implied the search carried out

by a first expert system was insufficient and requires further search by a second expert system);

processing the problem related data, the first set of search results and the second set of

knowledge representations by the second expert system to search for the solution to identify a

second set of search results *(page 10 lines 17-21 and page 11 lines 5-24)*; and

depending on processing results, selectively solving the problem by the second expert

system *(page 11 lines 19-24)* or presenting the first and second set of search results and problem

related data to a human *(page 11 lines 25-29)*.

However, Bajpai fails to teach of search results comprising preliminary solutions to a

problem. Carpenter et al. teaches forwarding, from an auxiliary system to a service system,

results comprising preliminary solutions based on auxiliary knowledge representations when a

problem is escalated to the service system *(column 3 line 61 through column 4 line 3, and*

column 4 lines 41-52, where a trouble ticket reflecting a failure including a description of fault

symptoms and other relevant information is a preliminary solution passed from auxiliary remote

diagnostics 22-24 to service system 11; a trouble ticket as taught by Carpenter et al. containing

failure information in attempt of a solution based on knowledge representation database 23 is

interpreted as a preliminary solution, in light of the exemplary problem/solution data as

described in the Applicant's Specification in paragraph [065](2)).

It would have been obvious to a person skilled in the art at the time the invention was

made to have included the preliminary solutions as taught by Carpenter et al. in the invention of

Bajpai. This would have been obvious because reporting of results containing a preliminary

solution as taught by Carpenter et al. in the form of a trouble ticket enhances the fault tolerance

and reparability of a client environment while reducing intervention by the client themselves *(column 2 lines 57-63)*, thus increasing the overall efficiency of the resolution system.

As in claim 10, Bajpai teaches a computer program product stored in a computer-readable medium comprising program code means for performing the method of claim 9 when the computer program product is run on a computer *(page 5 lines 1-6)*.

As in claim 14, Bajpai teaches an inference module processes the problem related data with knowledge representations in a dynamic adaptive order or a hierarchical order *(page 7 lines 1-16)*.

*   *   *

3.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bajpai in view of Carpenter et al., further in view of Turek et al. (U.S. Patent No. 6,460,070).

As in claim 7, the combined invention of Bajpai and Carpenter et al. teaches the first and second auxiliary systems each [respectively] have a service module to collect problem related data from the main systems *(Fig. 2 #30; page 5 lines 14-15)*, an acquisition module to acquire knowledge representations *(Fig. 2 #30; where expert system 30 is interpreted as acquire knowledge representations from expert system databases 34,36,38)*, a knowledge module to store the knowledge representations *(Fig. 2 #s 34,36,38; page 5 lines 18-20)*, and an inference module

for processing problem related data with knowledge representations to identify solutions *(Fig. 2 #30; page 5 lines 18-20)*, the inference module for selectively forwarding the problem related data through the [respective] service module to the [respective] main systems *(Fig. 2 #32; page 5 lines 12-17, where a user interface may be interpreted as a "main system" and an expert system, databases, and network connectivity may be interpreted collectively as an "auxiliary system")* and forwarding data to the service system *(page 11 lines 5-6)*.

However, the combined invention of Bajpai and Carpenter et al. fails to explicitly teach of forwarding solutions to a main system. Turek et al. teaches of system with a tier of main systems, a tier of auxiliary systems, and an expert system *(Figs. 1 and 5; column 3 line 47 through column 4 line 12, column 5 line 61 through column 6 line 25, and column 9 lines 30-36, where TN Manager 14 is interpreted as an expert system, Managed Nodes 16 are interpreted as auxiliary systems, and Terminal Nodes 18 are interpreted as main systems, where each system contains respective diagnostic modules and knowledge databases)*. The system as taught by Turek et al. parallels that as taught by Bajpai when the User Workstation 10 [Terminal Node] is interpreted as a main system, the Remote Diagnostic Workstation 12 [Managed Node] is interpreted as an auxiliary system, and the Engineer's Workstation 14 [TN Manager] is interpreted as an expert system, where the Remote Diagnostic Workstation 12 would forward solutions to User Workstation 10 or data to Engineer's Workstation 14. Further, it is interpreted that the inclusion of multiple Diagnostic Workstations 12 connected to at least one Engineer's Workstation 14 does not warrant patentability over the prior art [MPEP 2144.04(VI)(B.) "Duplication of Parts"].

It would have been obvious to a person skilled in the art at the time the invention was made to have included the layout as taught by Turek et al. in the combined invention of Bajpai and Carpenter et al. This would have been obvious because the invention of Turek et al. reduces the amount of resources necessary to operate in a distributed diagnostic system *(column 9 lines 45-50)*.

* * *

4.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bajpai in view of Carpenter et al., further in view of Aslanian et al. (U.S. Patent No. 5,111,384).

As in claim 8, the combined invention of Bajpai and Carpenter et al. teaches the inference module applies the knowledge representations for both main systems. However, the combined invention of Bajpai and Carpenter et al. fails to explicitly teach of distinguishing the main system versions. Aslanian et al. teaches of distinguishes version differences of the main systems by looking up in a check lexicon *(page 2 lines 3-43, page 3 lines 38-43, and page 8 lines 23-38)*.

It would have been obvious for a person skilled in the art at the time the invention was made to have included the version distinguishing as taught by Aslanian et al. in the combined invention of Bajpai and Carpenter et al. This would have been obvious because the invention of Aslanian et al. offers a time and resource efficient means of utilizing an expert system and a knowledge representation base in order to solve a problem *(page 1 lines 66-68)*. Further,

Aslanian et al. implies distinguishing of main system versions through the examination of various operating system files and the Registry *(page 9 lines 26-27 and page 10 lines 3-9)*.

* * *

5. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bajpai in view of Carpenter et al., further in view of Aslanian et al., further in view of Cha et al. (WO 01/18652 A1).

As in claim 12, the combined invention of Bajpai, Carpenter et al., and Aslanian et al. teaches the elements of claim 11. However, the combined invention of Bajpai, Carpenter et al., and Aslanian et al. fails to teach of an enterprise resource planning system. Cha et al. teaches of an enterprise resource planning system *(Fig. 4; page 4 lines 17-18, page 7 lines 3-10, and page 11 lines 18-24, where the R/3 system is interpreted as an enterprise resource planning system)*

It would have been obvious for a person skilled in the art at the time the invention was made to have included the enterprise resource planning system as taught by Cha et al. in the combined invention of Bajpai, Carpenter et al., and Aslanian et al. This would have been obvious because the invention as taught by Cha et al. offers a time and cost efficient expert system for diagnosing problems *(page 2 lines 5-12)*. Further, it is well-known in the art to implement expert system diagnostics in an enterprise resource planning system [R/3] environment *(Applicant's Specification paragraph [024])*.

As in claim 13, the combined invention of Bajpai, Carpenter et al., and Aslanian et al. teaches the elements of claim 11. However, the combined invention of Bajpai, Carpenter et al., and Aslanian et al. fails to teach of an R/3 system. Cha et al. teaches of an R/3 system *(Fig. 4; page 4 lines 17-18, page 7 lines 3-10, and page 11 lines 18-24)*

It would have been obvious for a person skilled in the art at the time the invention was made to have included the R/3 system as taught by Cha et al. in the combined invention of Bajpai, Carpenter et al., and Aslanian et al. This would have been obvious because the invention as taught by Cha et al. offers a time and cost efficient expert system for diagnosing problems *(page 2 lines 5-12)*. Further, it is well-known in the art to implement expert system diagnostics in an R/3 environment *(Applicant's Specification paragraph [024])*.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent No. 6,236,989 Mandyam et al. discloses cooperative knowledge bases.

U.S. Patent No. 6,098,061 Gotoh et al. discloses cooperative expert systems.

U.S. Patent No. 7,080,287 Salem discloses problem-solution escalation.

U.S. Patent No. 6,263,333 Houchin et al. discloses potential solution determination.

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Contino whose telephone number is (571) 272-3657. The examiner can normally be reached on Monday-Friday 9:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PFC
3/6/2007

SCOTT BADERMAN
SUPERVISORY PATENT EXAMINER